

with Kindest Regards
from J. G. Phillips

JOURNAL OF THE EXCURSIONS

OF THE

Elgin and Morayshire Literary and
Scientific Association,

FOR THE YEAR 1884.



ELGIN :

PRINTED AT THE COURANT AND COURIER OFFICE.

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MDCCCLXXXIV.

S. 64.

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THE CHURCH OF BIRNIE, AND THE EARLY BISHOPS OF MORAY.

THE Parish of Birnie is one of the most interesting districts in the Province of Moray, and it was fitting that one of the excursions of the Elgin Literary and Scientific Association should be made to it, as was done on Saturday, 3rd May, 1884. That excursion had two main objects—to examine the ancient Church of Birnie, and to visit the Ess of Glenlaterach, one of the most singular of the geological features of the county. Both these objects were fully and pleasantly attained.

The Parish may be described as a parallelogram, lying on a slope towards the north, connecting the agricultural plain of Moray with the gradually rising chains and peaks of a mountain area that culminates in the great ranges of the Cairngorm and Monaleadh. Streams which are tributary to the Lossie drain its valleys, and the Lossie itself, descending by many a rocky fall and pool through the chasms by which it has worn for itself an outlet from the wide lake-levels of Kellas, flows placidly by the dark red cliffs and whin-grown flats that lie round the “Holy Hill” of Birnie. Nothing can exceed the beauty, in autumn, of some of those wilder passes, where

the river is stirred from its usual quietude into the wild tumult of a mountain stream. The cliffs are broken into the quaint forms of rampart, and battlement, and tower ; and their sheer, precipitate sides are clothed and mantled with bramble thickets, and crowned with the slender forms of birch and mountain ash. But the gentle rising ground below, with its grey church, is the centre of human interest in the parish, and it is to it and its story that I am most inclined to devote the space at my command.

The early history of the Province of Moray is a peculiar one. There is first what may be called the Early Period, *i.e.*, from the remotest times till the reign of Kenneth M'Alpin, in 850—times upon the changing scenery of whose great ethnological movements and amalgamations the lights of individual historians are variously and somewhat confusedly cast. With the exception of the Roman invasions, there are very few events in this period which can be regarded in the light of definite history. The Second, or, as we may call it, the Norse Period (850-1000), is both more definite in its outlines, and has this peculiar interest, that in it we find Moray a separate province, almost a separate kingdom from the rest of the country, and owning the sway of Scandinavian rulers. The Third Period is that of the Maormors (1000-1150), a race of turbulent princes in frequent rebellion against the Scottish throne, and managing to maintain a state of semi-independence. The end of this period is distinguished by the occurrence of a remarkable event, which is variously described by different historians, and which seems to have consisted in the forcible transportation of the greater part of the inhabitants of Moray from their native Province to other parts of Scotland, and the introduction, in their place, of families of alien blood. This was the final blow to Moravian independence ; and

henceforward, in what we may call the Fourth Period, the story of the Province is merged in the general history of the Scottish Kingdom.

The early records of the Church in Scotland, especially in the North of Scotland, are extremely vague. From the times of St. Ninian, St. Palladius, St. Kentigern, and St. Columba, up to the ecclesiastical revival in the 12th century, there are but few facts which can be held as proved. Although the first three Saints had succeeded in converting the Southern Picts to Christianity, the races North of the Grampians were much later in receiving the light. The picturesque story is well known of how Columba, leaving the humble Church built of wood and thatched with reeds which he had erected in Iona, came to the stronghold of King Brude near the river Ness, and how, though derided by the Magi or heathen priests, he wrought the conversion of the King and his people. When we find Machar, one of his followers, penetrating to the mouth of the Don, and there founding a Church where the river wound in the form of a crosier, we need not doubt that in Moray there were established many outposts of the faith, and no site for such an erection is more historically probable than the Hill of Birnie, with its venerable traditions. The Paschal and Tonsure controversies which had agitated the early Scottish Church were set partly at rest by the Council of Whitby, but some time elapsed before the Roman usage was introduced into the Pictish kingdom by Nectan, the King, who also sent to England for an architect who might teach his people how to build a stone church. The site of this church, if it was erected, is not now known. No parochial or diocesan establishments existed in the early church, although there were bishops resident at the various conventional centres, so that Birnie itself may have had a

monastery and a bishop long before it became the episcopal seat of the Bishop of Moray. The whole of the Scots and Pictish kingdom was under the sway of the Abbot of Iona, who was a simple presbyter.* From about the reign of Nectan, onwards to the establishment of the Bishoprics, there is what Hill Burton calls an “enormous blank” in our Church history. This blank is in some sort occupied by the slender notices which survive of the Culdees, a religious body about whose origin, office, and doctrine a wide field of controversy still lies open, but who may be broadly taken as the successors of the Columbite clergy. St. Margaret, the wife of Malcolm Canmore, did much towards fostering the religious institutions of the country, and under her sons Alexander and David the ecclesiastical revival took definite form. It was probably in the reign of Alexander, about the end of what, in civil history, we have called the Third Period, that the Bishopric of Moray was founded, but of the precise date or circumstances of that event no record survives.

Keith, following older authorities, in the Preface to his “Catalogue,” puts the foundation as far back as the reign of Malcolm Canmore, but the first actual evidence of the existence of a Bishop of Moray is in the Foundation Charter granted by Alexander I. to the canons of Scone, in 1115, to which Gregory, Bishop of Moray, is a witness. His name occurs in a similar manner in 1124. In one of these charters the name of his see is omitted, but there can be little doubt as to his identity. Duukeld and St. Andrews were the only other dioceses then in Scotland.†

* See Dr. Grub's “Ecclesiastical History of Scotland.”

† Shaw's statement that Moray was the fourth see, in point of erection, is scarcely correct. Murthiac was not a regular diocese, and Glasgow was, as Dr. Grub says, “vacant almost for a whole generation before the commencement of David's rule.”

In the chronicle of Melrose, we find that in 1159, "William, Bishop of Moray, and Nicolas, at that time chamberlain of the King of the Scots, paying a visit to the Roman Court, on the service of King Malcolm, of their own free will went to see Pope Alexander at Agnania, which is beyond Rome. They were received by him with due honour. William returned in the year following, having been appointed the legate for the Kingdom of Scotland." On St. Edmund's Day (20th November) 1160, the Bishop of St. Andrews was consecrated by him as apostolic legate, "in presence," as the chronicle adds, "of King Malcolm, and the bishops, and abbots, and earls of the realm." He died, according to the Holyrood chronicle, on the 24th January, 1162, and was succeeded by Felix, of whom we know little.

The next Bishop, however, is a person of greater interest to us, as he is said to have been buried at Birnie. This was Simon de Toeny or Tonei. His name is the first in an ancient list of Bishops in the *Registrum Moraviense*, and, from his episcopate onwards, our course becomes clearer from the light thrown on it by that invaluable repository of historical evidence. From the chronicles and other sources, we gather that Simon was a monk of Melrose, and abbot of Coggeston or Kogeshall, in the county of Essex, from which place he had returned to Melrose in 1168. His election took place in 1171. He was conducted to Moray, and consecrated on the 23rd January, 1172. He seems to have been held in favour by William the Lion, who gives him the "decima reddituum et placitorum regis" in Moravia, and who confirms the gift of an island in the "Lake of Lunnin," and a piece of land in Duldavach, which Simon had granted to a personage described as "John the Hermit." The Chronicle of Melrose contains the entry of his death: "1184, Simon,

Bishop of Moray, one of our congregation, died on the 15th of the Kalends of October (17th September)." For the fact of his burial at Birnie, there seems to be no authority beyond the assertion of Keith and Shaw, and the strong probabilities of the case.

The early seat of the Bishopric of Moray varied between Birnie, Kineddar, and Spynie, as we are informed by Bishop Bricius himself. That the present church of Birnie was erected during the earlier episcopates seems most probable from the evidence of its architecture. It is one of a small number of Norman Churches existing throughout the country which are attributed to the twelfth century. The church is in the form of a parallelogram, with a small apse or chancel at the east end, separated from the nave by a beautiful and characteristic arch, supported on pillars whose carved capitals form an index of their style and period. The walls are constructed of square-cut blocks, and the material used (according to the testimony of the present learned and venerable successor of the Bishops), is freestone from the coast. No doubt there were other buildings in the neighbourhood of the church ; and, to form a true idea of the aspect of the place in the time we speak of, we must cover the whole surrounding country with forest, where wild animals ranged and swine fed on the beech-mast—through whose glades the hunting-horn of King William the Lion would not unfrequently sound as he rode out to the chase from his castle that rose over the meaner roofs of his faithful burgesses of Elgin. That he was often there there can be no doubt. The country was by no means in a settled condition, and this particular neighbourhood seems to have required his presence in a special manner. Many deeds in the Registrum Moraviense are under the King's hand "*apud Elgyn.*"

Richard, described as "clericus regis," was elected

Bishop of Moray on Sunday the 1st March, 1187, and "in the Ides of the same month (15th March), on the day of our Lord's Passion," as the Melrose Chronicle informs us, "he was consecrated at St. Andrews, in Scotland, by Hugh, Bishop of the same Church." The confirming charter by King William includes the addition to the benefice of the Church of Elgin, the Chapel of St. Andrew, the Chapel of Munben, and others. That the King had a considerable Court along with him at Elgin may be gathered from the fact that we find Hugo, his Chancellor, and Duncan, Lord Justiciar, signing as witnesses to his deeds granted there. In these deeds we frequently find the word "cana," which, according to the quaint interpretation of Skene, "in sindrie charters and infestments of lands specially halding of the Kirk is commonly used for the duety and revenue quhilk is paied to the superiour or lord of the land, and specially to Bischops or Kirk-men, quhidder it be quheat, beir, aites, or uther kinde of victuals, salt, or summs of mony." Many deeds of gift from King William to Bishop Richard show that he stood high in the royal favour. One in particular is worth notice, in which he receives authority to erect a mill "super terram meam de supra crohas que sunt super Loscyn subtus castellum de Elgin," and that the Bishop and his people should have free range and pannage in the royal forests round about Elgin, Forres, and Inverness, and rights of taking firewood, &c., therefrom, saving always the rights of "my burgesses of Elgyn, Forrays, and Invernys."

Richard was succeeded by Bishop Bricius in 1203, and with him our story of the Episcopate must end, for it was he who caused the Cathedral seat to be established at Spynie, whence, in a year or two, it was removed to Elgin. The clergy appear to have come to the conclusion that

Birnie was not a suitable centre of ecclesiastical affairs, but they were by no means at one as to the proper spot which they should choose. Spynie, which we must remember was then a sea-port, was thought by many to be somewhat out of the way, but the Bishop, with commendable prudence, argued that, as there were still malefactors who persecuted the Church, the approach to it should not be made too easy, "and, besides, the Bishop could there more easily and decently minister in spiritual and temporal things to his Lord the King." An application was made to Pope Innocent, and his Holiness, in 1207, referred the matter to the Bishops of St. Andrews and Brechin and the Abbot of Lindores, and ordered them, when they came to a decision, "to decorate the said church with the honourable name of Cathedral." Spynie was eventually chosen, and eight canonries were appointed. We find a charter referring to this new establishment as the Church of the Holy Trinity of Spynie and the College of Canons there serving God. Bricius modelled his Cathedral on that of Lincoln. At his death, in 1222, he was buried within the sacred precincts which owed so much to his care and zeal.*

But this state of things lasted only for a very brief period, and the story is well known of how the succeeding Bishop, Andrew Moray, animated probably by the example of Bricius, carried his ambition to a more magnificent fulfilment in the founding of Elgin Cathedral on its present site. He himself rests beneath the broad slab of blue slate that is still conspicuous in the grass-grown choir.

Having wandered somewhat from my starting point —the grey old Church of Birnie—I have left my-

* In the "Otia Imperialia" of Gervase of Tilbury there is an interesting list of the bishoprics of Scotland about this time.

self little space to speak of the other objects of interest that lie in and around it. And, in endeavouring to adhere to the strict confines of known or ascertainable history, I have refrained from many speculations which the place and its peculiarities suggest. No one, however, who has stood looking over the wide plain from Kellas to the sea, no one, more particularly, who has crossed the wild Mannoch hill by its broken and forsaken road, can avoid the "thick-coming fancies" that lead him back into the vaguer and remoter past. Was this the track of Roman legions marching due northward to the sea? Was that dim promontory that stretches into the blue firth the Taurodunum of Ptolemy? Did the purple-sailed Phœnician galleys ride at anchor, once, down yonder, while the Sidonian mariners lit their altars on the hill? In later times, did the flames of the sun-god Mithras rise from the mysterious mound where the "clavie" is still lit on New Year's Eve? There are solid grounds for all these conjectures. Here, at Foths, are traces of Roman entrenchments—have we not all wondered at the "bull-stones" of Burghead or Torrietown? and have we not peered into that strange temple, bath, or well that carries us back to the time of the Antonines, when bulls were sacrificed in underground sanctuaries on the Mithraic festival of the New Year?* At Shogle there are remains of a Danish Camp, and we may supply the unwritten records of many an early year with the constant tale of conflict in which Roman and Pict, and Viking and Maormor, strove fiercely and long for the soil beneath our feet. Moreover, it was in a smith's hut "near Elgin" that Macbeth, the most celebrated of all the Maormors of Moray, goaded on by

* See Dr. Mitchell's "Vacation Notes" in Vol. X. of the Proceedings of the Society of Antiquaries, and the suggestion he mentions as having been made by Dr. Grigor, Bairn, of the Mithraic character of the remains at Burghead.

Gruach his wife, slew “the unguarded Duncan.” It was on this same Mannoch road that, not so very long ago, the water kelpie was last seen !

But, shutting out these wider prospects and wilder fancies, let us enter the church itself. Our attention is attracted by a quaint tablet let into the north wall. The sculpture is grotesque, and the monogram and coat-of-arms are flanked by symbols of mortality. The inscription is as follows :—“Here lies under this pulpit the corps of Mr. Wm. Sanders, lait minister of this parochin, who deceased the 13 of May 1670, and of Katharin and Elspet Sanders his children.” Another tablet is erected to the “Memory of Joseph Anderson, Minister of Birnie,” from March, 1766, till the time of his death. Within the church, also, may be seen a stone font, of somewhat rude workmanship, and the famous “Ronnell Bell.” The latter is one of the best specimens of its kind, and what is known of it or of them may be found interestingly set forth in Dr. Anderson’s learned work. It is said that earth from the hill of Birnie used to be sent for, for purposes of interment ; it is well known that if a man be sick, and he be prayed for in the Kirk of Birnie, “it will either mend him or end him !”

So let us take leave of the plain grey church, grateful for its gentle memories, and hoping that it may long survive to dominate this peaceful hillside with its venerable presence.

DAVID J. MACKENZIE.

THE SAND HILLS OF CULBIN.

ON Saturday the 9th July, 1884, the Association visited the Sand Hills of Culbin. Mr. Pirie, who acted as guide, read the following paper :—

THE SAND HILLS AND BARONY OF CULBIN.

The Sand Hills of Culbin have been so often described that it is scarcely possible for any one to speak or write on the subject without falling into old ruts. My paper on this occasion is not to contain an exhaustive description of the Sand Hills, or to give a full history of the estate and barony of Culbin. I am simply to mention some special features or peculiarities in connection with the Sand Hills, and give a short account of the ancient barony.

SAND HILLS.

On viewing the Sand Hills from a distance they seem to extend over a small area of ground. The full extent of them can only be realized on walking over the ground. They are situated in the parish of Dyke and county of Elgin, and consist of a series of small hills and hillocks extending along the sea shore for four or five miles, and for three miles of this distance they extend inland about two miles. They rise occasionally to the height of a hundred feet above the sea. Mr. Patrick Duff, writing in 1842, gave the height as 118, and Mr. Martin, writing at

a later period, said 200 feet; but, according to the ordinance survey, the greatest height is 99 feet. (Farther west are the Maviston Sand Hills in the county of Nairn.)

Large portions of the Sand Hills are bare, without the semblance of vegetation. In some places the bent grass grows abundantly, and in other places heath or ling. In the hillocks adjacent to the river Findhorn, opposite the village of Findhorn, the ling grows thick and bushy. In some parts it is a foot high, and in other places not more than an inch above the surface of the ground. In some of the hillocks and ridges lying between the Shelly Hillock and the Buckie Loch, there is a close covering of common hair-moss (*Polytrichum commune*).

Near the sea beach, about three quarters of a mile west from the mouth of the river Findhorn, there is a hillock called the "Shelly Hillock." It is of the kind known as "kitchen middens," always to be found near the spot where the primitive inhabitants had a settlement. This hillock contains layers of shells, alternating with layers of sand, the shell beds being from nine inches to three feet in thickness, and the intervening layers of sand from six inches to two feet in thickness. There are found in the shell beds various marine shells, such as oysters, cockles, mussels, and periwinkles; also fish hooks, bones of fishes, rabbits, and other animals.

On a gravelly beach, about 300 yards south of the Shelly Hillock, near the old course of the Findhorn, are the remains of early settlements, where there are to be found fragments of crucibles, slag, pourings of melted metal, iron knives, fish hooks, flint implements, fragments of mediæval pottery, coins, bronze buckles, rings, &c.

About 300 yards north-east from the last-mentioned place there is a mound about 20 feet high, and 130 feet in diameter at the base. It has a gravelly beach on the

south side, and it slopes into a sandy hillock at the north side. There are a few yards of grassy ground on the top. The soil on the top is black, and from 9 inches to 21 inches deep. This black mould is mixed with small stones, and below is sand. The grassy top is level, and appears to be the remains of a more grassy covering. The sides of the mound are covered with small water-worn stones, mostly broken like road metal. This mound appears to have been artificially raised, but for what purpose does not seem very certain. Possibly it had been a place where the early settlers met to discuss their common affairs, devise laws, and administer law. Eminences were used as places for courts and meetings, the judges and persons in authority placing themselves on the summit, visible to the surrounding multitude, yet separated from the throng.

ORIGIN OF THE SAND HILLS.

Various theories have been offered as to the formation of the Culbin Sand Hills, and where the sand came from. Whatever was the origin of the Sand Hills, it is pretty evident that the sand which overspread the arable land in the seventeenth century did not come from a distance, but from the sand hills in the immediate vicinity. The name Culbin is from *Cul-beinn* (the black hill). This black hill was covered with bent, broom, and juniper ; and it appears from an Act of the Parliament of Scotland, passed in the year 1695, that the drifting of the loose sand which proved so ruinous to the estate of Culbin was mainly occasioned by the pulling of bent, and of broom and juniper bushes, which broke the surface of the hills. There is little use in forming theories as to where the sand came from some 200 years ago, when we find it distinctly stated in an Act of Parliament enacted at the time, that the drifting of the

sand was occasioned by the pulling of bent, broom, and juniper. This was the immediate cause of the drifting of the loose sand, but where the sand came from that formed the original sand hills is another question. All sand, in the first place, is formed and accumulated by the action of water. We see sand hills anywhere. No matter how far inland, or what elevation above the sea, we find accumulations of sand. Very recently, when the workmen were employed digging for the foundation of the fine block of buildings in Commerce Street, Elgin, we had a favourable opportunity of seeing an accumulation of stratified sand, evidently placed there by aqueous agencies. The present Sand Hills of Culbin are, for the most part, what is called the subaërial formation. Hugh Miller gives us the following peculiarities of this formation at Culbin :— “ In some of the abrupter sections laid open by the winds, tufts of the bent-grass (*urundo arenaria*, common here, as in all sandy wastes), that had been buried up where they grew, might be distinctly traced, each upright in itself, but rising tuft above tuft in the steep angle of the hillock, which they had originally covered. And though from their dark colour, relieved against the lighter hue of the sand, they reminded me of the carbonaceous markings of sandstone of the coal measures, I recognised at least their arrangement as unique. It seems to be such an arrangement, sloping in the general line, but upright in each of the tufts, as could take place in only a sub-aërial formation. I observed further, that, in frequent instances, there occurred in the surface of the sand, around decaying tufts of the bent-grass, deeply marked circles, as if drawn by a pair of compasses or a trainer, effects apparently of eddy winds whirling round, as on a pivot, the decayed plants.”

Those present here who saw the sand hillock at

Rutherford, on the new Coast Railway between Elgin and Garmouth, on the occasion of our last excursion, will possibly consider it as a sub-aërial formation, possessing the "peculiarities above described.

ESTATE AND BARONY OF CULBIN.

The estate was in the possession of a family named Kinnaird from 1478 to 1698. It was sold to William Duff in 1698, and remained in the possession of the Duffs till 1733, when it was sold to Ludovick Colquhoun of Luss. I have seen the original inventory of the title-deeds and papers in connection with the estate when it was sold in 1733. This document is headed—"Inventory of the writes and evidents of the Lands and Barony of Culbin, sold and disposed by John Duff of Culbin, with consent of Alexander Arbuthnott and James Blair, merchants in Edinburgh, and Andrew Hay of Montblairy, Writer to the Signet, trustees for the creditors of the said John Duff, to Mr. Ludovick Colquhoun of Luss, advocate."

The inventory contains sixty-eight articles, which fill twelve pages of foolscap paper, from which the names of the family of Kinnaird and their transactions in bonds and money matters can be ascertained. Article 1 shows that in 1478 a charter under the Great Seal was granted to Allan Kinnaird of that Ilk, and Janet Keith his spouse. Article 37 shows that "William Duff, Elder Bailie of Inverness," obtained a contract of wadset of "the five ploughs of land of Bin, *alias* Middlebin, the salmon fishing pertaining to the musle scalp of Culbin, and the common stell on the water of Findhorn with the tiends, parsonage, and vicarage of the said lands and fishings."

Article 57 shows that, on the 17th Februaïy, 1694, decree of adjudication was obtained before the Lords of Session, at the instance of the said William Duff, against

Alexander Kinnaird of Culbin, "comprehending the particular lands, milns, fishings, and others therein recited, with the Manse of the Chappell and Chaplanrie of St. Ninian, lands of Earnhill and lands of Easterbin, with the pertinents."

Article 62 shows that, on the 27th July, 1698, Alexander Kinnaird sold to the said William Duff the whole lands and barony of Culbin, the fishings belonging thereto, the tiends thereof, and all other pertinents.

It does not appear that William Duff kept the estate long in his possession, for we find from article 64 that he disposed the whole to his son, Alexander Duff of Drummuir, on the 16th November, 1698, who disposed the same to his second son, John Duff, on the 15th February, 1725. John Duff, with consent of his trustees, sold Culbin on the 19th January, 1733, to Ludovick Colquhoun of Luss, for the sum of £11,366 19s 8d Scots. The inventory bears to have been signed by John Duff, at the Abbey of Holyrood House. Probably he had been there taking refuge in the sanctuary, in order that he might be protected from his creditors.

I may here notice some historical points mentioned in Shaw's "History of Moray," published in 1775. In speaking of Culbin he says—"About 1705 the house, gardens, and a great part of the lands were quite covered with sand blown from Maviston Hills, and the barony was sold to Alexander Duff of Drummuir." Further on he says that the said Alexander Duff purchased Moy, and "conveyed Moy and Culbin to his second son, John Duff, and from his creditors, Major George Grant made the purchase about 1732; upon whose death in 1755 without issue, these lands came to his nephew, Sir Ludovick Grant of Grant."

The preceding contains several errors—

1st. It was at least ten years previous to 1705 that the house, gardens, and part of the estate were covered with sand. It appears from the narrative of an Act of the Parliament of Scotland, passed in 1695, as already mentioned, that the desolation must have taken place to a considerable extent previous to 1695. Some authorities say that part of the estate was overspread with sand as early as 1670.

2d. Alexander Kinnaird of Culbin dispossed the lands and barony of Culbin to William Duff on the 27th July, 1698, who dispossed the same to his son Alexander Duff of Drummuir on the 16th November, 1698; and Alexander Duff conveyed Culbin to his second son John Duff on the 15th February, 1725.

3d. Culbin was not sold to Major George Grant in 1732, but was sold to Ludovick Colquhoun of Luss in 1733.

In Grant's edition of Shaw's History published in 1826 no notice is taken of these errors. Ludovick Colquhoun, above referred to as the purchaser of the lands and barony of Culbin, was second son of Sir James Grant of Grant (son of Ludovick Grant who died in 1717), who was sometime designed of Pluscarden, and married in 1702 Anne Colquhoun of Luss, sole heiress of Sir Humphrey Colquhoun of Luss, and in virtue of the settlement of that estate, made by his father-in-law, he succeeded to the estate and baronetcy of Luss, and took the name of Colquhoun, but upon the death of his brother Alexander (1719), he resumed the name of Grant, and took possession of the Grant estates, retaining the baronetcy. The estate of Luss, in virtue of the entail, went to his second surviving son, James. But in the first instance it went to his second son Ludovick, which would account for his being

designed as Ludovick Colquhoun of Luss in 1733. He succeeded to the Grant estates in 1747, and was afterwards designed Sir Ludovick Grant of Grant.

I now come to the rental of the lands and barony of Culbin when sold to Ludovick Colquhoun in 1733. I have seen the conditions of the roup. This document occupies twelve pages of foolscap paper, and shows the names of the farms and crofts, the names of the tenants, and the rent paid by each. The gross rental is given as follows:—

Nine bolls of bear meal.
 One boll two firlots flour.
 One hundred bolls and three firlots bear.
 Twenty-seven pounds eighteen shillings money.
 Forty-one heers of yarn.
 Thirty-one capons.
 Twenty-eight hens.
 Six poultry.
 Eighty-five loads of peats.

After deducting the minister of Dyke's stipend and certain feu-duty, the neat rental is given. Then follows a scheme of the rental—

To the neat money rent—Twenty-two pounds two shillings eight pennies Scots money.

To nine bolls bear meal, at four pound per boll—Thirty-six pound.

To one boll two firlots flour, at ten merks per boll—Ten pound money.

To eighty-three bolls three firlots two lippies bear at five pound per boll is four hundred and seventeen pound thirteen shillings and two pennies money.

To forty-one heers of yarn, at one shilling per heer—Two pound one shilling.

To eighty-five loads of peats, at one shilling and six pennies per load—Six pound seven shillings and six pennies.

Annual neat produce in money—Four hundred and ninety-four pound four shillings and four pennies Scots money, which, at twenty-two years' purchase, amounts to ten thousand eight hundred and seventy-two pound fifteen shillings and four pennies money forsaid.

I have only now to refer to the old course of the river Findhorn, which we have a favourable opportunity of seeing from our present position (a well lying between the Shelly Hillock and the Buckie Loch). It may be interesting to know that the river at one time entered the sea at

a place known as the Old Bar, about six miles westward from the present channel of the river. The Buckie Loch, which we see a short distance to the westward, forms part of the old channel. An old plan, which was prepared and authenticated in 1765 by Peter May, surveyor, shows the river Findhorn from the Sluie Pool downwards to the river's mouth. The river has altered its course very little since this plan was prepared, but the old channel was then more distinct than it is now, and the plan shows that the old course struck away from the present channel at a place called Elvin Point, about three quarters of a mile down from the houses at Binsness, and then continued its westward course by the the Shelly Hillock and the Buckie Loch to the Old Bar.

The party then retraced their steps to Kinorth, and drove on to Moy, where they were met by Mr. Macdonald, Wester Moy, who pointed out the old churchyard of Moy, and several interesting stones in it, one of which bears the date 1707. It is a beautiful little spot close beside the House of Moy, and is surrounded with fine old trees. We then drove to Wester Moy, where Mr. Macdonald, with great kindness and hospitality, had an excellent tea and refreshments of various kinds prepared. Nothing could exceed his kindness and attention, and the recipients will not soon forget it. Bailie Law, in proposing a vote of thanks to Mr. Macdonald, expressed the feelings of all in a few neat and pithy sentences. Mr. Macdonald, replying, said he would be glad to see the members of the Elgin Literary and Scientific Association back again.

TO GARMOUGH AND FOCHABERS.

SATURDAY, JUNE 14, 1884.

To my mind, that is an excellent story of a Scotchman who, in a moment of enthusiastic ecstasy, turned about and briskly thumped his neighbour. Nay, it is more, it is a pronounced pourtrayal of a national characteristic. Similar evidences of superfluous energy are of daily occurrence, however. Indeed, such a physical heartiness pervades our every occupation and pastime, that the characteristic has ceased to become noticeable, save when marked by the thorough eccentricity I have mentioned above. A lethargic Oriental, who for the first time had mentally grasped the medley of inconvenience, hardship, toil, and indigestion which goes to constitute a thoroughly enjoyable picnic—hearing that it was an Englishman's holiday—became speechless at such overwhelming evidence of imbecility. A Turk calmly watched a keenly contested fight between two cricket teams. He saw, in addition to the terrible earnestness of the players, how thoroughly and nervously sympathetic the vast concourse of spectators were, and he became perfectly satisfied that insanity was general throughout all classes of the British public. The more we think of the decidedly earnest way we conduct ourselves even for amusement, the more we must sympathise with the philosophy of those heathens. Let us look at it in this light. Were I to ask the members of our

Society if they were prepared some day to rush through their ordinary occupations, to walk or run a mile, as the case may be, against time, burdened with eatables or drinkables, or such other apparatus as antiquarian enthusiasts might deem necessary for a day's outing—to be hustled into a ballast waggon, and jolted over an unfinished rail track, behind a boggy engine, belching smoke and dust abundantly about them ; were I to ask if they were prepared, after such particularly ungentlemanly treatment, to stumble for a mile or two over a bouldery river course, with the alcoholic uncertainty such a slippery footing entails, they would say no ; and yet, in plain language, such was the start, and little more, of the excursion of which I am expected to say something.

My readers may be inclined to think disparagingly of a Society that was booked through to Garmouth in a ballast waggon. They may be prompted to say it must have been neither fish, flesh, nor good red herring ; but the reason of the consignment was simply this, that the Coast Railway, over which we travelled, was still incomplete, and that we made the journey at the kind invitation of Mr. Granger, the contractor, in one of his "saloon" carriages. Even under favourable circumstances, it is difficult to gracefully glide into a railway carriage. How awkwardly, then, was our party placed, standing at the rail level in front of the ballast waggon. We looked like the remnant of some forlorn hope, gazing yearningly at the crest of an impregnable redoubt that had to be entered. Need I say that it was ! And, considering the various stages of inactivity represented among us, it was well done. Thanks to the consideration of Mr. Granger, too, we gained some experience in shipping and unshipping ourselves during the journey, to inspect one or two beautiful examples of sand-drift—exercise which would have been invaluable

for a fire-brigade ; and so we were enabled to disembark at Garmouth with all the grace and dignity characteristic of our Society.

Almost unconsciously we bent our steps to the river, to where the railway was to cross the broad, bare, stony estuary. Engineering operations were in full swing, in search of a reliable foundation for the piers of the viaduct. At first no especial difficulty was anticipated, and the opinion was endorsed by the striking of sandstone rock at a depth of about 20 feet. Much more difficulty was encountered in the case of the main pier ; indeed, to such a depth were operations unsuccessfully carried on, that one firm after another threw up the contract, and the question became one of intense interest and anxiety. At last, by the sinking of segmented cylinders to the depth of about 60 feet, under the direction of Mr. W. Stephenson, for Mr. Fyfe, Aberdeen, a substantial foundation was secured. There was no other object of interest to be visited here, nothing to stimulate that peculiar diversity and perversity of opinion to be always found where two or three are gathered together. There was one point, but upon it there was complete unanimity of admiration. It was the beautiful irregularity—the profound regard for disarrangement which pervades Garmouth, its houses, lanes, streets, and gardens. It has an historical association, though, worth mentioning. King Charles II. landed here on the 23rd day of June, 1650, having been “ moved to come to Scotland and embrace the Covenant,” and, in a house, the site only of which remains, belonging to the Laird of Innes, he signed the Solemn League. That was a great day for Garmouth, and is still annually commemorated in Maggie Fair, named after the Laird of Innes’ Lady. I do not know what feelings were most prevalent amongst our party during the next few miles’ drive. There lay

before us the broad shingly expanse of river-bed, great tracts of pebbly beach—sand and gravel; chequered here and there with straggling patches of stunted whin and grass, and many a trace of flood-swept *debris*. The swift Spey brawled through this, now gleaming with the fitfulness of a diamond's glitter, and again sulking into indigo pools as “dauds o' licht noos an' thans glintet upon the water.” None could have been other than struck with such bold and vivid contrasts; but to me, besides all these charms, every twist and twine of that river, every expanse of “scaup,” every patch of stunted whin, was associated with days of thorough irresponsibility. It is wonderful how much of the poacher pervades youth, and I think it is just the excitement of being a little wicked that frequently leads boys to that keen interest in their surroundings which they often manifest, and more especially in nature. The district we were now looking at is by far the richest in the North from an ornithological point of view. Apart altogether from birds common to our district generally, numerous sea birds and other strangers of great rarity and beauty frequent and nest here. I do not intend to give a tedious list of them all, but I should like much to mention the rarer varieties I have myself met with, and in doing so I shall give them as they are met with in the three distinct localities lying before us.

Upon the shingly “scaup” between the water edge and the stunted furze which marks the occasional flood-line of the river, we have the resort of the oyster catcher unmistakeable in his black cut-away-coat, white vest, and red nose; the redshank, greenshank, sandlark, or plover; the ringplover, tern, arctic tern, and lesser tern, the three last of all sea-birds being the most beautiful and fairy-like in size and mode of flight.

The second district is as distinctive in its character as the first. It is that lying immediately beyond the shingle, covered with sparse stunted vegetation and heaps of *debris*. Here we have the waterousel, wagtail, piedwagtail, flycatcher, black-headed bunting, stonechat, whinchat, and titlark.

The third belt lies farther still from the river, densely covered with underwood, whin, bramble, and thorn and willow, with occasional flag-edged or mud-bordered pools. Here the wild duck, coot, teal-duck, snipe, water-rail, sedge-warbler, pheasant, willow-wren, snow-bunting, siskin, red-pole, redstart, greenfinch, snowflake, titmouse, long-tailed tit, meadow-pipit, and golden-crested wren, all nest. All these I mention apart from the ordinary every-day birds known to us all.

Nothing is more remarkable than the strong resemblance which the eggs of these birds, as far as colour goes, have to the particular locality in which they nest. To generalise a little, the eggs of all birds, the nests of which may be definitely expected in stated characteristic localities, are distinctly typical in colour of their immediate surroundings. And, further, the eggs of all birds having a great variety of nesting place—that is, which do not nest in any characteristic locality—have great diversity of colour, and are consequently less distinctive. To illustrate this I will select four birds of different and marked habitat—the oyster-catcher, the water-hen, curlew, and grouse. The first is an out-and-out “scaup” or shingle bird. The egg is of a warm-stone colour, speckled not profusely with grey and warm brown. Only an adept could come upon them other than accidentally, so thoroughly do they resemble the shingle amongst which they lie, for these waders and shore-frequenting birds build no nest. The eggs of the water-hen have a lighter ground shade, more ochrey, with

rich senna and brown spots plentifully over them, exactly simulating the predominant tints of the sedge and flags and water-washed stumps among which they are found. The curlew builds on the mossy hillside, embedded in moss to the windward of some tree stump or bracken-shaded knoll, and its eggs are of a beautiful olive-green ground, with profuse brown and dark-green mottlings. The grouse, secreted among wind-swept stunted heather, with only the remnant of its purply beauty left it by the roughness of winter, and the fresh tints of a new summer still undecided, has an egg of a bleached dirty-ground, spattered or "claurtit," if I may use a good Scotch word, with dark purply brown. The same distinctive colourings pervade the separate groups of birds to a more or less degree, and, whatever the cause may be, the reason is plain. The nests are also characteristic, though to a much less extent.

There is not one, I believe, who has not been swindled by some bird wiling him away from its nest or young. Some may think it instinct, but, so far as my experience goes, I am convinced it is reason. I remember on one of these poaching days we had crept close to the edge of a willow-bordered pool. A few ducks, in guileless innocence, were floating upon its surface, feeding in the shallow water with that somersault motion we have all seen. It occasionally happened that tails alone were visible, and such a golden opportunity was seized by us to pelt the skied rears they presented with peas from our catapults, always keeping concealed. People may think a duck expressionless. They ought to have seen the look of intense surprise their heads wore as they bobbed to the surface. Seeing nothing, they resumed operations with the same result. This time they were much more surprised, and viewed each other with great suspicion. Again operations were started on both sides, and, at this time, every individual

duck was convinced that it had been subjected to indignity by its neighbour—and a wild free fight ensued. I am sure that humanity could have done no more—could not have given more evidence of keenly wounded feelings—nor resented injury with more pluck and spirit.

The journey continued over the bridge, through Fochabers, down the east bank of the river, to inspect the Roman Fort on the wooded high ground a little below Bellie Kirkyard. Little or no evidence exists of such a fort, but we know that the vicinity has other historical reminiscences, for the Spey has been forded here by the royal troops of Malcolm Canmore, Alexander I., and Malcolm III., and here also the forces under Cumberland crossed on their way to Culloden Moor. Leaving our machines to meet us at Fochabers, we walked through the gardens and grounds of Gordon Castle, a walk rendered equally as instructive as it was pleasant, being escorted by Mr. Webster himself. The Castle, too, was thrown open for our inspection ; and I cannot forget to mention here how deeply moved as a Society we were at the handiwork of some unknown enthusiast which we noticed. He had taken compassion upon some old pieces of armour lying in the recess under the tower, and had revivified them with a good solid coat of stone-colour paint. Notice ought to be taken of such a man, and his good qualities directed into some suitable channel !

A long cold drive was before us ere we would reach home, and to enliven it a bit, I will tell you another story about one of our members. It came to my recollection as we passed the scene of its enactment, a little loch on the roadside. We had been all day on a nesting excursion, but had met with little success, owing to the lateness of the season. Here a goodly brood of young ducks, better known as flappers, was encountered, and the pent-up

energy of a dull day was expended in heartlessly stoning them. The "still small voice," however, had whispered to some effect to our member, and, moved with compassion, he had, unobserved, hid one unfortunate duck in his bosom, intending to let it escape at a favourable opportunity. The intention was good, but ere long the rescued one was forgotten, and, in the rough boy-play of the home journey, the rescuer was thrown flat on his face. I shall never forget the scene that followed. On raising himself his eye caught a dangling bit of bowel protruding from under his waistcoat. A deathly pallor came over his face, and, summoning all the life that was in him, and pointing to the fatal protrusion, he made the appalling statement that "he was burst!" and swooned away. The effect was terrific. Every one seemed rooted to the spot—every eye fixed upon the deadly sign. It was just a case of loved and lost, however, for that loop of intestine was the saved flapper's.

ERNEST ÆNEAS MACKINTOSH.

THE FINDHORN.

THE Elgin and Morayshire Literary and Scientific Association visited the Findhorn on May 31, 1884. The visit was intended not only to explore the geological structure of the river, but also to pick up any information possible of historical, antiquarian, or botanical interest. Any one of these subjects, adequately treated, would be more than sufficient for the space at command, and any one of them will amply repay a visit. This was understood by the members of the Association, for the number who joined the excursion, both of ladies and gentlemen, was the largest of the season. A special carriage was chartered from the Highland Railway Company to Forres, where vehicles were waiting to convey the party inland. The weather, a most important matter on all such occasions, was most auspicious. Everything that could render the excursion pleasant and profitable was there.

There is no finer river in Scotland than the Findhorn. It combines everything which makes a river interesting. Rising away up among the granite hills of Inverness, it sweeps seaward through scenes of the greatest beauty and magnificence. As it enters the plains and nears the Moray Firth its beauty gets softer, but all is replete with historical and legendary interest. It then glides past the Mead of St. John, where Sir Thomas Dick Lauder pictures the tournament in his Wolfe of Badenoch. It is a beautiful spot on the west bank of the Findhorn,

and might well have suited for such a scene. As we swept past the imagination conjured it up : the steel-clad knights, with their drooping plumes and long lances, bestriding the snorting war horses ; the galaxy of proud beauties in the grand stand, flashing sunbeams from their eyes on their devoted champions, who were risking life and fame for a smile. We could almost fancy we heard the herald cry and the trumpet sound, and see the rush, the shock, and the rearing horses, and in the background Ancient Fenwick on his nag. 'Tis a pity the nineteenth century is so practical. A little farther up the river is the Heronry, so called from the number of herons that used to build there. Crows, however, envied the herons their beautiful retreat. They also founded a colony. By degrees the herons lost ground, got disgusted, and latterly left the spot altogether. A new rival to the crows has appeared in the shape of a detachment of pioneering jackdaws, but whether they will manage to oust the crows remains to be seen. Between the Heronry and Sluie the view is of surpassing loveliness, but it is a beauty which words fail to describe. One must see it, and even then the mind fails to grasp the vastness and magnificence of the scene. On the left bank of the Findhorn there stretches away for miles the trackless and almost primeval forest of Darnaway, where, as described by Wintoun, Randolph, Earl of Moray, baffled the forces of Edward the Third. On the occasion of our visit the tree tops were gilded with a mellow light that failed to pierce the deeper gloom. Downwards the country broadened out into plains of deep green, mingled with woods where pine trees bent their graceful heads to the breeze. Farther down the bleak solitary sandhills of Culbin reared their bald ungainly crowns, grinning as if in mocking irony at the paradise around. Farther back

the waters of the Moray Firth, like a silver streak, seemed to kiss the hazy hills of the North with a laughing ripple, clasping them as the white arms of a mother clasps her first-born child. It was a scene never to be forgotten. We have stood where Highland Dee rushes in foam from the mountains, tossing his waters as a war horse tosses his mane ; we have stood where the infant waters of the Don issue from the dark glens of Corgarff, and roll down through romantic Strathdon ; we have stood and looked with admiration on the amber Aven as it flashed out like a sunbeam from the mighty mountains which guard the sources of its birth in that wild and storm-swept land, and wind by many a lovely and enchanting scene ; and we have stood where the broad and bounding Spey sweeps majestically past ; but never did a panorama of glory spread out before our vision as that lowland scene did, and the ever-varying light and shade played over it, making all like a dreamland, an Elysium where nymphs and fairies dwell, and where sorrow may not enter.

Apart from its scenic beauty, the Findhorn possesses a deeper and more lasting interest to the scientist, especially the geologist. Fifty-six years ago Sir Roderick Murchison and Professor Sedgwick visited the Findhorn, and, after examining the sandstones of the district, came to the conclusion that they belonged to the Old Red formation. Murchison afterwards said, however, that he and his colleague had no notion that organic remains lay under their feet. In 1838-9 Dr. Malcolmson, a medical officer in the East India Company's service, who was on leave of absence, wrote a most admirable paper on the same subject, which was read before the Geological Society on the 5th of June, 1839. In it he states that organic remains were discovered on the 6th October, 1838, and suggested that the specimen should be named *Randolphi*,

in honour of the hero mentioned above. It was a very modest request. Unfortunately, this memoir was not published in the transactions of the Geological Society, but, through the kindness of Dr. Gordon, Birnie, we have seen a MS. copy. Dr. Gordon, in his able paper on "The Geology of the Lower or Northern Part of the Province of Moray," published in the *Edinburgh New Philosophical Journal* for Jan., 1859, complains bitterly of the injustice done to his friend Dr. Malcolmson, in his paper not having been published. Dr. Gordon was his fellow-labourer, and there were not two more enthusiastic geologists anywhere, and it is to their labours and that of Mr. Patrick Duff that the geology of the county is so well known. If Dr. Malcolmson did not get justice from the Geological Society of that time, his worth and his labours are fully recognised now, and we take this opportunity of paying a tribute to his memory. But there were other workers in the same field. Moray had a host of able men then. Chief among these, apart from the three mentioned, were Mr. Stables, Cawdor, and Mr. John Martin, the late Secretary of this Association. All those gentlemen have written upon the Findhorn, and latterly the work has been continued by Messrs. Horne and Peach of the Geological Survey. Under these circumstances, with the space at command, it is only necessary to give a brief *résumé* of the part gone over in our excursion.

The geological formation which underlies the rich and fertile plains of Moray is vast and varied. The Middle and Upper Old Red Sandstone is found scattered throughout France, Belgium, Germany, Russia, and England, as well as in many other places. It is largely developed in Devonshire, which gave the Old Red its other name of Devonian, and which is perhaps the better name of the two. The term Red is misleading, and was simply given

to the system from the prevailing colour in certain localities. For example, *Red* is quite applicable and very descriptive of the formation in Elginshire, especially in the vicinity of Fochabers; while in Caithness, on the opposite side of the Firth, it would have no bearing whatever, the colour there being bluish black or grey. Yet, by the fossils which the Caithness flags contain, we know for certain that they were deposited at the same time as the ? Moray sandstones, and under the same circumstances. ? A glance at a geological map of Scotland will show the distribution of the system in the districts referred to. The Old Red forms the coast line all round by Inverness, Ross, Cromarty, and Sutherland to Caithness, with the exception of a strip on the Sutherland coast running between Golspie and the Ord. This borne in mind will go to support a theory which we have formed of the area of the Old Red sea in the North, and which has been partially suggested by the publication of a remarkably able paper by Messrs. B. N. Peach and J. Horne of the Geological Survey, entitled, "The Old Red Volcanic Rocks of Shetland." A perusal of it, and taken in connection with the Old Red formation on the north-eastern seaboard, or, more correctly, on the coasts of Moray and Banff, suggested the theory. The Old Red Sandstone extends along the greater part of the lowlands of Moray, and is only lost in crossing the Spey at Orton. Farther down that river, at Fochabers, it crosses the stream and creeps on to Tynet, a section of which has been so rich in fossiliferous remains. Pursuing the coast eastwards to Cullen, solitary masses of Old Red conglomerate are seen standing rugged and shattered where the retreating waves left them. Still following the coast the formation again appears at Gamrie, where it has yielded numerous fossils. Taking, then, the coast as a base line, and following the formation inland, we find that from

Gamrie it extends in a strip into Rhynie. Again, it appears in Glenlivet and beyond Tomintoul, where it is lost in the spurs of the Grampians. On the Findhorn river it does not reach nearly such an elevation, but comes to an abrupt termination at Sluie. Looking at these facts, the theory is, that the present backbone of the northern part of Great Britain was an island in the Old Red sea. No doubt there has been enormous denudation, and the waves of that period may have, in bays, lashed the base of the Cairngorms. But there is no evidence to prove that it ever covered these mountains, or that they have been forced up through the stratified beds of the system. Again, as pointed out above, an almost continuous strip of the same formation runs round the coast to Caithness, where it is much more fully developed. Then, moving round to Cape Wrath, it appears, in detached portions it is true, but almost continuous, down the western coast till near the Sound of Sleat. Between these two coast bands, the great mass of the country is gneiss. What is meant, therefore, by all this is, to show either that a great part of the North of Scotland was an island in the Devonian Sea, or that denudation has been so enormous as to obliterate the system, which we do not believe. With the space at command, we cannot go more into the general distribution of the system in Britain in support of the theory, but we are convinced that, in its main features, it is correct.*

A word on Palaeontology in passing. We know that the waters swarmed with fish. Their remains have been

* Since the above was in type, my attention has been called by Dr Gordon to Professor Geikie's great paper on the "Old Red Sandstone of Western Europe," read before the Royal Society of Edinburgh on 1st April, 1878, and which I had not before seen. In it Professor Geikie promulgates the same views as the theory I ventured to suggest.

found in large numbers throughout the basin of the Old Red in the North, and some of them of a high order, such as *Holoptychius nobilissimus*. Those Old Red fishes were among the first of vertebrate life. According to Murchison, fishes first appear in "the Ludlow zone of the upper Silurian." It matters not, evolution teaches that from them all vertebrate life has been evolved. Did no creature exist upon the land in those mighty æons of time? It is only the sea that has divulged a few secrets by the giving up of its dead. The land could not, because then, as now, when they died, they decayed and left no trace of their existence. Yet it is hard to believe that no creature higher than a worm or an insect lived on the land when so many forms of life teemed in the seas. Are palæontologists sure they are correct?

Another fact pointed out by Messrs. Peach and Horne is the great volcanic activity which was going on in what is now Shetland, and the comparative tranquillity of the basin lying between that part and the mass of mountains which towered above the waters. But pass beyond them to the Old Red in Central Scotland, and the scene again changes. Sub-marine volcanoes belched forth their molten floods amidst the hissing waters. Under this condition of things there may be an explanation of that curious band of rough concretionary limestone called Cornstone, which lies in the lap of the Old Red of Moray. Hugh Miller first suggested the theory, viz., that it was formed through calcareous springs. It is not a newer formation than what it rests upon, and has no connection with any other formation in the North. Taking that along with its peculiar position, which looks as if it had flowed, river-like, from a given point or points in a line running from south-west to north-east, the explanation of its existence seems simple and natural.

During volcanic eruptions in the sea-floor in the immediate vicinity, nothing is more likely than that boiling springs ejected the matter which is now wrought at Elgin and the Findhorn as limestone. We must say, however, that the late Mr. Patrick Duff did not group this formation with the Old Red sandstone, but we think his was the only dissenting voice.

The lower part of the Findhorn, like the lower part of Moray throughout, is composed of vast deposits of drift, the wearing of the higher lands, caused by the erosion and denudation of former times, while underneath these accumulations repose the Old Red beds. Few sections that give an opportunity of geological study occur throughout this region. At Cothall, the cornstone alluded to above is wrought as a limestone, and yields about 75 per cent. of lime. Whether its origin is chemical or not, it supplies a want which, without it, would be very much felt in the district. Crystals of arragonite, and iron pyrites, are found scattered through this limestone, and chalcedony is found associated with it, but it has never yielded anything organic. Advancing up the river, cliffs of the Old Red begin to appear, and continue until Sluie is reached, when that system suddenly ceases, and the Silurian—if it is Silurian—takes its place. There is a slight fault here, and in the left bank of the stream the breccia is seen resting against the Silurian. Downwards evidences of false bedding are abundant, and the coarse sandstones alternate with lenticular beds of clay. The change in the character of the country becomes strikingly apparent at Sluie. All downward are to be seen the sunny plains and pleasant slopes, while, where the gneiss begins, the district assumes a sterner and grander aspect. Proceeding upward the stream tosses and foams between crags of gneiss, which have been gradually cut out during the countless cen-

turies which have elapsed since the Drift. Here and there could be seen bands of granite running into and almost through the Silurian, branching out into small veins, which gradually get lost in the newer formation. Of course, for such a phenomenon there can only be one explanation, namely, that the granite, with the mighty internal heat, had been in a state of fusion, and, as the stratified beds of the silurian were bent and broken with convulsions, the boiling mass beneath was forced into the crevices and rents. A little farther up the Divie pours its waters into the Findhorn. Near this junction is Randolph's Leap. This is a narrow chasm through which the Findhorn has forced its way. At the narrowest part it is only eight feet wide, and, far below, the river rushes through the gorge like a racehorse flecked with foam. The origin of the name is briefly thus—Cumming of Raites was assisting a kinsman at Inverlochy when intelligence reached him that Randolph was preparing for war. On receiving the news, Raites exclaimed, "With the help of God I will fight this battle and that too." He was defeated, however, and he hurried away with the intention of surprising Randolph, but Randolph was too many for him. He had an ambush in waiting near Darnaway, which almost annihilated the band of Raites. Alister Bane, son of Cumming of Dunphail, retreated with the remnant of his force, and tried to cross the Findhorn. Randolph, however, had foreseen this, and had a detachment waiting on the other side. In an effort to cross by another ford the Cummings were beaten, and the young chief, seeing this, flung his standard to the other side, and, calling out "Let the bravest keep it," leaped the chasm, cut his way through the enemy, and escaped. Those who desire more information on the subject will find it in Sir Thomas Dick Lauder's "Moray Floods."

During the flood of '29 the Findhorn rose at Randolph's Leap fifty feet. A stone marks the spot.

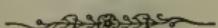
Our party rejoined the vehicles at this point, and drove on to Glenferness. Advancing upward, the country gradually assumes more of a Highland character. It is comparatively bare, and the hills are roundshouldered and squat, but it changes at Glenferness. No pen that ever wrote could picture the grandeur, the magnificence of Glenferness, where the Findhorn rushes foaming and hissing through it, here boiling and eddying in deep, black pools, and there sputtering and leaping over gigantic boulders torn in fury from the mighty metamorphic crags which vainly try to stem it. As the party strolled down the path, which in many places has been hewn out of the rock, exclamations of wonder and amazement escaped the lips as every new scene of beauty unfolded itself. It was altogether different from the picture which we saw from the Herony. There it was a lovely lowland landscape—ancient forests, a sunny sea, and hazy hills in the distance. Here it was a mountain torrent, dashing irresistibly along the gorge, with great beetling cliffs on every side, round which the wintry wind would shriek and moan like an angry fiend. Abundant evidence of the whirlwind's force was seen in the number of broken and uprooted trees which find a scanty sustenance among the crevices of the rocks. Among the broken stones oak ferns grew in great luxuriance. Glenferness House, belonging to the Earl of Leven was visited, and Relugas House, where the gardens were opened to the party. It is a beautiful place Relugas. Some of the scenes around it are absolutely enchanting, and seem more like the gorgeous and luxuriant pictures presented beneath the sunny skies of the South than a landscape in our mountain land. The valley below the house is densely wooded, and it seemed as if all the birds

had united to utter a pæan of praise. It came floating on the wind, ravishing the ear like a siren's song, and the air was laden with fragrance and perfume. A little above the House are the Falls of the Divie, a beautiful little cascade where the stream precipitates itself over a mass of gneiss, and thunders into a black bubbling abyss far below. It was hard to part from such a spot, but it had to be done. We rejoined the vehicles and drove through a smothering cloud of dust back to Forres, in time to catch the last train.

This sketch cannot be closed without stating how much of the success of the excursion was due to the kindness of Mr. Walker, Altyre, and Mr. Wink, Elgin. The former got us permission to visit Glenferness House and the Altyre grounds, while the latter did the same with Relugas.

J. G. PHILLIPS.

THE COAST FROM LOSSIEMOUTH TO BURGHEAD.



SATURDAY, AUGUST 2, 1884.

AMONG the Excursions got up in connection with the Elgin Literary and Scientific Association, one of the places visited was the coast between Lossiemouth and Burghead, and the object of this paper is simply to draw the attention of one unacquainted with the ground to a few points of interest in the journey. It is ground in which a very enjoyable day can be spent, whatever may be the tastes of the excursionist. Commencing at Lossiemouth, its reptiliferous sandstones deserve more than a passing glance. About a quarter of a century ago the geological age of these rocks was a subject very keenly discussed among scientific men, and the district was then visited and examined by several eminent geologists from a distance, including Murchison, Lyell, Nicol, Ramsay, and Harkness. From the relation of these sandstones to rocks of undoubted Old Red in the district around, one party considered them to be the upper beds of that system—the other party, attaching importance to the remains of reptiles found in them, maintained they were of Triassic age. The fossils on which so much stress has been laid in discussing the subject consist as yet of only three reptiles that have been satisfactorily determined, but there are traces of other animals. The one first discovered is that

to which the name *Stagonolepis Robertsoni* has been given. It is considered to have been an ancient crocodile having a strong resemblance to certain species living at the present day, such as the Caiman, an alligator found in tropical climates. Of its having been an animal of that kind there can be no reasonable doubt, and a person has only to compare the scutes of *Stagonolepis* with those on a crocodile in a museum to be struck with the resemblance between the two, not only in shape, but even in ornamentation. Its size was considerable, the most recent discoveries warranting the belief that it reached a length of at least eighteen feet. The fossil reptile next discovered is the *Telerpeton Elginense*. It is the remains of a lizard remarkable for its close resemblance in structure to certain species of small lizards still existing. It was a small animal, its entire length having been only ten or eleven inches. The third fossil is the *Hyperodapedon Gordoni*, its specific name having been given to it in honour of Dr. Gordon, Birnie. It also was a lizard, but one that differed considerably from the *Telerpeton*. Its remains show that it must have been an animal six feet at least in length. In structure it had a close resemblance to the *Sphenodon*, a reptile still found living on the coast of New Zealand. This fossil is interesting from the fact that it has been found also in the trias of Warwickshire, Devonshire, and Central India, and that was considered by some sufficient to fix the age of the Lossiemouth sandstones. The assumption, however, that similarity of fossil remains alone establishes the identity of the age of the deposits in which they occur is now beginning to be received with some caution, and geologists to be satisfied consider some other evidence desirable. In connection with this question an interesting discovery was made a few years ago by Mr. Linn, of the Geological Survey, who found fossils of the

Old Red almost in the immediate neighbourhood of the reptiliferous sandstones. In a portion of rock cropping up in the flat to the west of Stotfield he found traces of *Holoptychius* and *Pterichthys*, and then near Elgin fossils considered at one time to be characteristic of the Old Red and the New Red have been found in the same quarry, although not in the same stratum. The question, therefore, has lost none of its interest by the discoveries made in the district within the last few years, and it still awaits a solution that will give general satisfaction. Besides these fossils foot-prints are found not only at Lossiemouth, but also in the rocks round the coast, as at the Gow's Castle and at the Masonhaugh Quarry. These were undoubtedly made by animals, but there is no satisfactory evidence to connect them either with the fossils described or with any known species.

Another rock, very different from the fossiliferous sandstones, and one well worthy of examination, is exposed along the shore in the direction of Stotfield. It has various designations, but it is generally known as the Cherty Rock of Stotfield. It is a very peculiar and easily recognisable rock, composed principally of calcareous and siliceous materials. It was burned at one time for lime, but it was found to be unsuitable for the purpose on account of the quantity of Silica in it. It overlies the reptiliferous sandstones, and the junctions of the two may be well seen in the harbour opposite the Brander Arms Hotel. This rock contains no fossils, but it has been considered an important one in the attempt to decide the age of the sandstones on stratigraphical grounds. The relation of this rock to the Old Red in the neighbourhood is not quite clear, and nowhere in Elginshire has the Cherty Rock been seen covered by any other beds, but in Sutherland the case is considered to be different. Some patches of rock near

Golspie, that were examined by Professor Judd several years ago, were pronounced by him to be identical in character with the Cherty Rock of Stotfield. He considered also that the series of sandstones underlying the Cherty Rock near Golspie were similar to the reptiliferous beds of Lossiemouth, and that the strata overlying it were of the age of the Lower and Middle Lias, and from this sequence of strata on the north side of the Moray Firth he inferred that the sandstones on the south side at Lossiemouth were of Triassic Age.

The Cherty Rock of Stotfield is, however, perhaps better known to the general public, in consequence of the repeated attempts that have been made to work the lead in it. All these attempts have as yet proved unsuccessful, as might have been expected from the fact that the lead, instead of being collected into veins, is disseminated through the rock. At first, the existence of a few small, isolated patches containing ore at the surface tended to give a false impression regarding the abundance of the metal, but now that these have been exhausted, the prospect of a remunerative search for it underground is, to say the least, far from encouraging.

Near the Mines, in the Old Hythe of Stotfield, there is a patch of soft, greenish-white sandstones well worthy of notice. It is of a more recent age than the Reptiliferous Sandstones, and it is evidently faulted against them and the Cherty Rock of Stotfield. It is possible that it is the vestige of a formation that at one time covered a more extensive area, and that it has been preserved from denudation by the hard, indestructible, cherty rock near it. This patch has yielded a very considerable variety of fossils, almost all being in the condition of casts, of which the following may be mentioned :—*Pholadomya oblita*, *Myacites calceiformis*, *Astarte rhomboidalis*, *Cypricar-*

dia caudata, Tancredia axiniformis, Modiola imbricata, and Ostrea Sowerbyi-Plant remains have also been found. The fossils found in this rock plainly show that the beds of it belong to the Lower Oolites. This patch is very interesting from its being undoubtedly *in situ*, whereas the patches of Oolite found more inland, as at the Loch of Spynie and Inverugie, consist evidently of transported blocks. It is worthy of remark that in all respects the beds of this patch agree very closely with their equivalents in Sutherland. Before leaving Stotfield, notice may be taken of the traces of terraces in the Links near it, and of some of the plants in the locality. At one time the former were very distinct, but they are in a fair way of being obliterated by the progress of recent changes and improvements. Among the plants may be mentioned *Lepidium campestre*, *Astragalus glycyphyllos*, and *Convolvulus arvensis*, near Lossiemouth; and *Astragalus hypoglottis*, *Triticum junceum*, *Linum Catharticum*, and *Radiola millegrana*, near Stotfield. Along the sands from Stotfield to the Lighthouse some of the sections in the bank of blown sand running parallel to the shore are worthy of being examined from the resemblance of their stratification to the cross stratification observable in the rocks near Covesea. The most noticeable plants on the way are *Salsola Kali*, *Cakile maritima*, *Elymus arenarius*, *Zostera marina*, and *Thalictrum minus*, the first three growing vigorously in almost pure sand. Here, after a storm, may also be picked up the following sea-weeds:—*Phyllophora Brodiaei*, *Polysiphonia Brodiaei*, *Dasya Coccinea*, and *Laminaria bulbosa*. The first two have their specific names from a former Mr. Brodie of Brodie, who discovered several new species of *Algæ* on the coast of Moray. The last is so rare that its existence here was at one time doubted by the late Professor Dickie, but he was

satisfied when a stem of it, picked up near Stotfield, was sent to him.

At the Lighthouse commence the celebrated caves that are a prominent feature of the rocky coast for a considerable distance, and that are known as the Covesea Caves. The most remarkable of these are—Sir Robert's Stable, the Sculptured Cave, Dumansdel Cave, and Helg's Hole. The first is so named from the circumstance that Sir Robert Gordon of Gordonstown, son of the famous Wizard of that name, concealed his horses here during the rebellion of 1745-46. The small bay in which it is situated is a favourite place for picnics, and, little wonder, for there is not a more beautiful spot along this part of the coast. In the neighbourhood are some beautiful instances of false or cross stratification, which are well worthy of examination. Among the attractions of this place not the least is the profusion of its wild flowers, of which the following are the most deserving of notice :—*Asplenium marinum*, *Saxifraga granulata*, *Arenaria peploides*, *Silene maritima*, *Scilla verna*; and, a little further to the west, *Ligusticum Scoticum*, and *Mertensia maritima*, the leaves of which taste like oysters. *Scilla verna* is confined to a small spot above the stairs leading up from the Stable.

The Sculptured Cave is some distance to the west of Sir Robert's Stable. The discovery of sculptures in the caves at Wemyss suggested an examination of this cave for similar remains. This was undertaken by Lady Dunbar of Duffus, who sent sketches of some figures on the walls to Dr. Stuart of Edinburgh, the well-known antiquarian. Although many of the figures are evidently modern, Dr. Stuart came to the conclusion that there was no doubt as to the antiquity of some of them, such as the crescent, the sceptre, and the fish, all common on ancient

sculptured stones. The three symbols occur side-by-side on the left wall of the most easterly of the two entrances into the cave. There are a good many inscriptions, ranging from 1653 downwards. One reads thus—"12 of Mar. 1653. CVRSED BE TEY YT PLINDERS." This cave is also one of the many evidences round the coast of the gradual elevation of the land. Its present position, high and dry above all states of the tide, points to a time when the ceaseless action of the mighty ocean excavated the rock and formed the cave when at a considerably lower level than at present. Not far from this there is a small section of conglomerate which is worth seeing, but not very accessible. It occupies what appears to have been originally the entrance to a cave. This was afterwards evidently filled up with boulders, shingle, and sand, and, in the course of time, the whole had become a mass of almost consolidated conglomerate. Beyond this, a considerable distance along the coast, is the Clashach Quarry, another of the places in which footprints have been found. Here also traces of glacial action may occasionally be seen, the surface of the sandstone being polished and striated. It may be mentioned that the cherty rock both at Stotfield and Inverugie is similarly polished and striated.

On the way to Hopeman the most westerly of the caves, called Helg's Hole, is reached, but it is better known as Hell's Hole. It is a favourite haunt of tinkers and other vagrants. It extends for a considerable distance into the heart of the rock, and, to see it properly, lights must be used. This cave, unlike the rest, has not been formed by the action of the ocean, but is a fault in the rock. The false stratification in the sandstone here is very noticeable. A short distance inland from this, at Inverugie and The Keam, is the patch of transported boulders of oolite already referred to. Mr. A. Robertson

of Inverugie made a large collection of the fossils here, which show that the boulders are of the age of the Lower Lias.

Passing on to Cummingstown, the next place of interest is the Masons' Haugh Quarry near it, in which slabs with footprints have been frequently found—some of them very peculiar. A bed with very interesting footprints lay exposed for a long time in this quarry, but it has now disappeared. In conclusion, I need only refer to the casts of sun-cracks at Burghead Point, and the occurrence of *Ophioglossum Vulgatum* near the Village. The cracks have often been mistaken for a fossil, and certainly a novice might be pardoned for the mistake, for one large central crack and several lateral ones branching from it have a striking resemblance to the backbone and ribs of some gigantic fossil.

JAMES GRANT.

DARNAWAY.



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ON 17th May, 1884, the members of the Elgin and Morayshire Literary and Scientific Association held their second excursion of the season to Darnaway Castle. The company left the Museum at twelve o'clock in three vehicles, and drove away westward. During the early morning rain fell heavily; the clouds still looked gloomy and threatening, and an occasional shower damped the ardour of spirits. But the trees and the fields were green, and, as we swept through the Oak Wood, birds were chirruping among the boughs, and from the deeper recesses came the whistle of the blackbird and the proud song of the thrush. All nature was awake and smiling beneath the glittering rain drops that studded all things as with a garment of stars. We passed Alves at a rattling pace, passed Sweno's Stone, and entered the ancient burgh of Forres, surrounded with its woods and groves and rich fields. A halt of half-an-hour was made here to allow the horses to feed, and the party broke up and sauntered about the town. There is nothing new to tell about Forres, and its past is well known. The horses were again yoked, and we drove on to Darnaway. The country all along the route is lovely, a land of undulating plains, with the woods of Brodie on the right and the forest of Darnaway on the left, stretching away up in shaggy glades to the dark, heathery hills. But there is nothing wild or majestic,

nothing to fire the imagination. 'Tis a peaceful scene where the winds kiss the cheek softly, and carry on their breath the delicious odour of the woods, a land where the husbandman reaps the reward of his toil in security, and sits contented and perhaps happy.

Arriving at Darnaway, we were joined by Mr. Brown, factor for the Earl of Moray, who had kindly consented to act as guide to the party, and show us everything of interest about Darnaway. The Castle is a plain massive structure, and in its outward appearance has little to attract attention or rouse the emotions. There is little even in its situation which can be called much out of the usual way of such mansions, but it has a history which must ever touch a chord in the breast of every Scotchman. Here lived Randolph, the friend and companion-in-arms of Bruce, sharing in his defeats and victories when the noblest of our race were struggling to be free. With their blood and heroism they struck the fetters from the limbs of the Scottish people, and bade them stand forth free and emancipated, establishing at once their liberties and nationality. Among all the gallant men who followed the fortunes of Bruce there was not a nobler soul than Randolph. Generous and brave, he was trusted by his followers, and he never led them but to victory. The Border counties of England, after that race had been driven from Scottish soil, learned to tremble at the names of Douglas and Randolph. It was with strange emotions, therefore, that we entered the hall in Darnaway Castle which yet bears his name. And as we lingered there the imagination conjured up many a scene of bygone times its aged walls had witnessed—many a scene of wassail and rout of triumph and despair. In that noble hall many a queenly and lordly form has glided through the dance, and many a soft tale of love has been whispered under the pine

torches' blaze, and many a council pregnant with weal or woe to Scotland has met there. But all have gone like a dream of the night, and only the hall remains. It has passed through revolution, fire, and tempest, when dynasties have crumbled and but their name remains, and, when the fate of the greatest empire upon the face of the earth hung in a bloody balance, almost within sight of its walls, Randolph's Hall stood safe among its groves. And there it stands still, and long may it stand, a noble memorial of the soaring soul who planned it—a monument to patriotism and glory, a monument of everything that is great and noble in man's nature, a monument hallowed by a thousand associations in the history of a great people, and which can never die.

But there are things in it which attract visitors apart altogether from historic associations. The roof of the hall is a masterpiece of construction and strength, and one wonders how they ever got those ponderous beams reared into position. There is a peculiarity about the way in which they are fixed into the wall. They are not even and regular as in a modern building, but go in with a sort of skew. The wood is of black oak. The furnishings of the hall are simple and chaste. A few chairs of black oak, carved with an antique pattern, rest on the polished floor at intervals; but there is a mirror, on one side of the hall, the frame of which is carved with the most exquisite art and beauty. At the bottom of the frame there is the figure of an angel babe cut out of the oak in full relief looking up at another angel child on the top of the frame, who is riding on an eagle, and catching a wreath descending from heaven. Beside the eagle there is another figure of an angel looking eagerly and wistfully at the descending wreath. On each side of the mirror there are similar figures holding coiled serpents, who are stretching their

long necks, and their glittering envious eyes are looking up at the angels and the wreath. The whole frame is the most elaborate we have seen.

The hall is lighted with six beautifully stained windows, three on one side, one in the end, and two on the opposite side. On one side the windows are ornamented with the Scottish lion rampant, and in the large gable window are the Moray arms. On the other side the two windows have a monogram in the centre of a buckle, and the ring of the buckle bears the words, *Salus Christum Redemptorem*. On the top of the buckle is a swan supporting an earl's coronet.

Besides Randolph's Hall there are several pictures which Mr. Brown pointed out which have a strong historic interest, especially Darnley, the Bonnie Earl of Moray, and Cardinal York, the brother of Prince Charlie. After seeing through the Castle, we were conducted to the roof, where we had a view of the surrounding country, and there could be few fairer prospects. At our feet on each side lay the fertile plains of Moray, with clumps of wood interspersed here and there amid the green fields. Northward lay the Moray Firth, calm and placid, like as if no tempest could ever stir its breast. Beyond were the huge mountains of Caithness, Sutherland, and Ross, shooting up as it were out of the waters, dark and mysterious, shrouded in a dank haze like spirits of the storm. Nearer, the Soutars of Cromarty loomed black and frowning, like the open lips of a gigantic leviathan into which flowed many floods.

But time was short, and we could not linger over the enchanting scene. Descending, therefore, we followed Mr. Brown to the gardens, and saw through them and the hothouses, after which we returned to the Castle, and re-entered the vehicles and drove away to Earlsmill, where

the whole party were kindly entertained to tea by Mr. Brown. He also showed the party a very fine collection of botanical specimens, collected by himself, and also dried and mounted. After tea all went out to examine two trees of enormous dimensions, one of which is hollow. Into this hollow eight of the party walked, and stood comfortably, if closely. Its circumference is 21 feet. The other tree, in the immediate neighbourhood, measures 19 feet. Again entering the machines, and waving adieu to Mr. Brown, we started on the homeward journey, and reached Elgin about half-past nine, all being highly pleased with the day's proceedings.

ss Phillips

